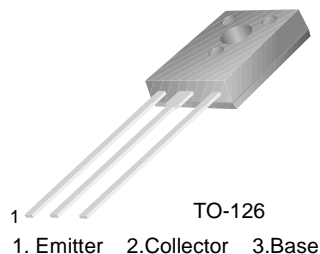


CRT Display, Video Output

- High Current Gain Bandwidth Product : $f_T = 400\text{MHz}$ (Typ.)
- High Collector-Base Breakdown Voltage : $V_{CBO} = -200\text{V}$
- Low Reverse Transfer Capacitance : $C_{re} = 1.7\text{pF}$ (Typ.)



PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Ratings | Units |
|-----------|--|------------|------------------|
| V_{CBO} | Collector-Base Voltage | - 200 | V |
| V_{CEO} | Collector-Emitter Voltage | - 200 | V |
| V_{EBO} | Emitter-Base Voltage | - 4 | V |
| I_C | Collector Current (DC) | - 100 | mA |
| I_{CP} | Collector Current (Pulse) | - 200 | mA |
| P_C | Collector Dissipation ($T_a = 25^\circ\text{C}$) | 1.2 | W |
| P_C | Collector Dissipation ($T_C = 25^\circ\text{C}$) | 7 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | - 55 ~ 150 | $^\circ\text{C}$ |

Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|------------------------|--------------------------------------|--|----------|------|-------|---------------|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = - 10\mu\text{A}, I_B = 0$ | - 200 | | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = - 1\text{mA}, R_{BE} = \infty$ | - 200 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = - 100\mu\text{A}, I_C = 0$ | - 4 | | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = - 150\text{V}, I_C = 0$ | | | - 0.1 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{BE} = - 2\text{V}, I_E = 0$ | | | - 0.1 | μA |
| h_{FE1} h_{FE2} | DC Current Gain | $V_{CE} = - 10\text{V}, I_C = - 10\text{mA}$ $V_{CE} = - 10\text{V}, I_C = - 60\text{mA}$ | 40 20 | | 120 | |
| $V_{CE}(\text{Sat})$ | Collector-Emitter Saturation Voltage | $I_C = - 30\text{mA}, I_E = - 3\text{mA}$ | | | - 0.8 | V |
| $V_{BE}(\text{Sat})$ | Base-Emitter Saturation Voltage | $I_C = - 30\text{mA}, I_E = - 3\text{mA}$ | | | - 1.8 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = - 30\text{V}, I_C = - 30\text{mA}$ | | 400 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = - 30\text{V}, f = 1\text{MHz}$ | | 2.3 | | pF |
| C_{re} | Reverse Transfer Capacitance | $V_{CB} = - 30\text{V}, f = 1\text{MHz}$ | | 1.7 | | pF |

*** h_{FE} Classification**

| Classification | C | D |
|----------------|---------|----------|
| h_{FE1} | 40 ~ 80 | 60 ~ 120 |

Typical Characteristics

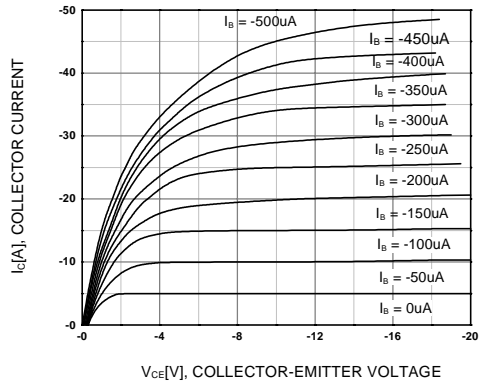


Figure 1. Static Characteristic

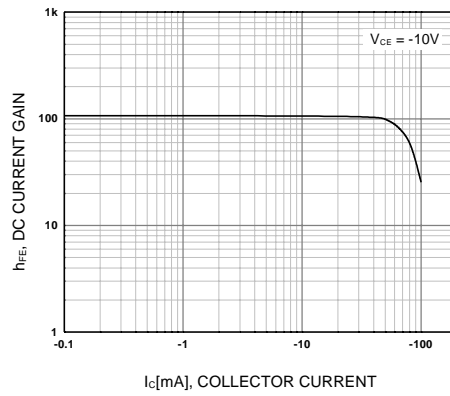


Figure 2. DC current Gain

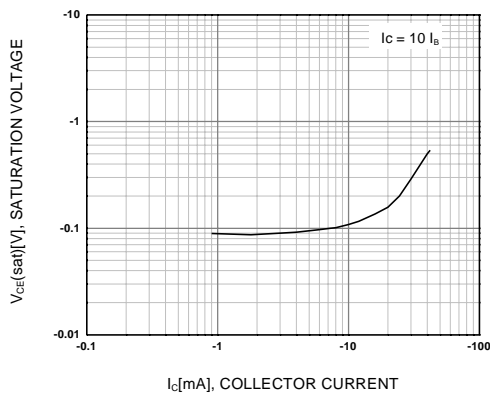


Figure 3. Collector-Emitter Saturation Voltage

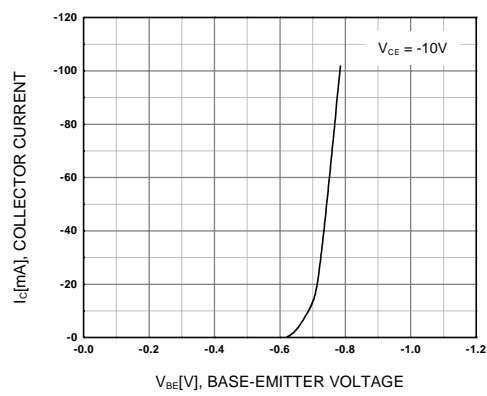


Figure 4. Base-Emitter On Voltage

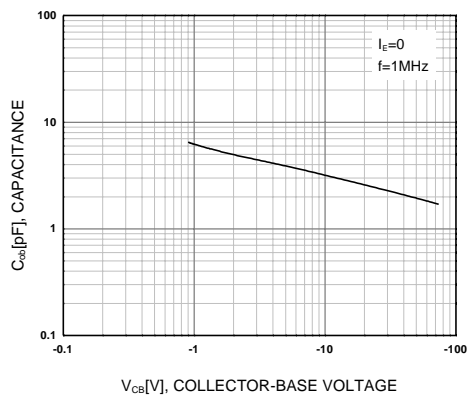


Figure 5. Collector Output Capacitance

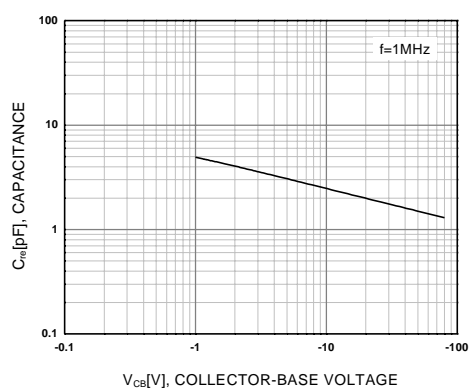


Figure 6. Reverse Capacitance

Typical Characteristics (Continued)

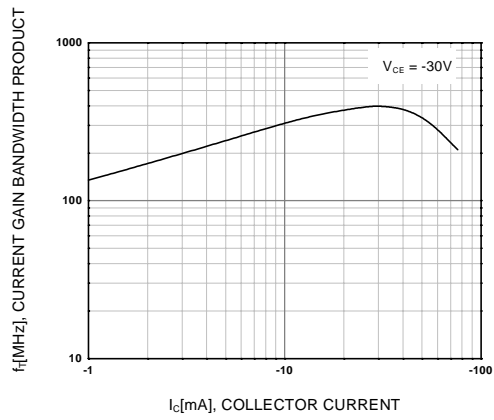


Figure 7. Current Gain Bandwidth Product

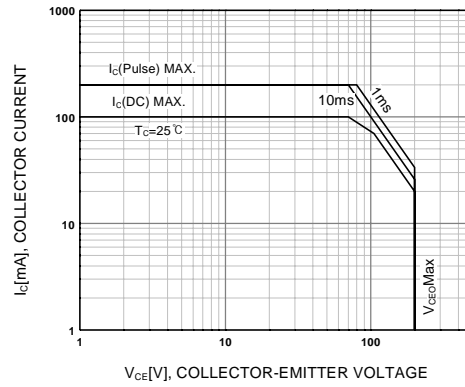


Figure 8. Safe Operating Area

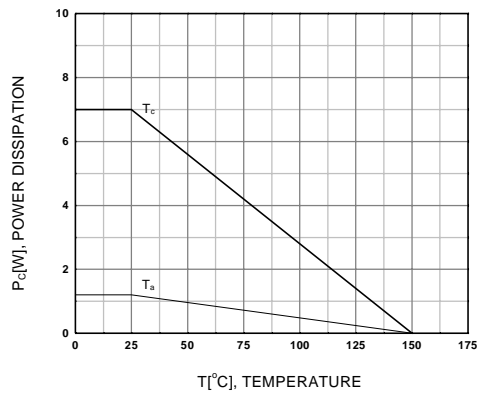
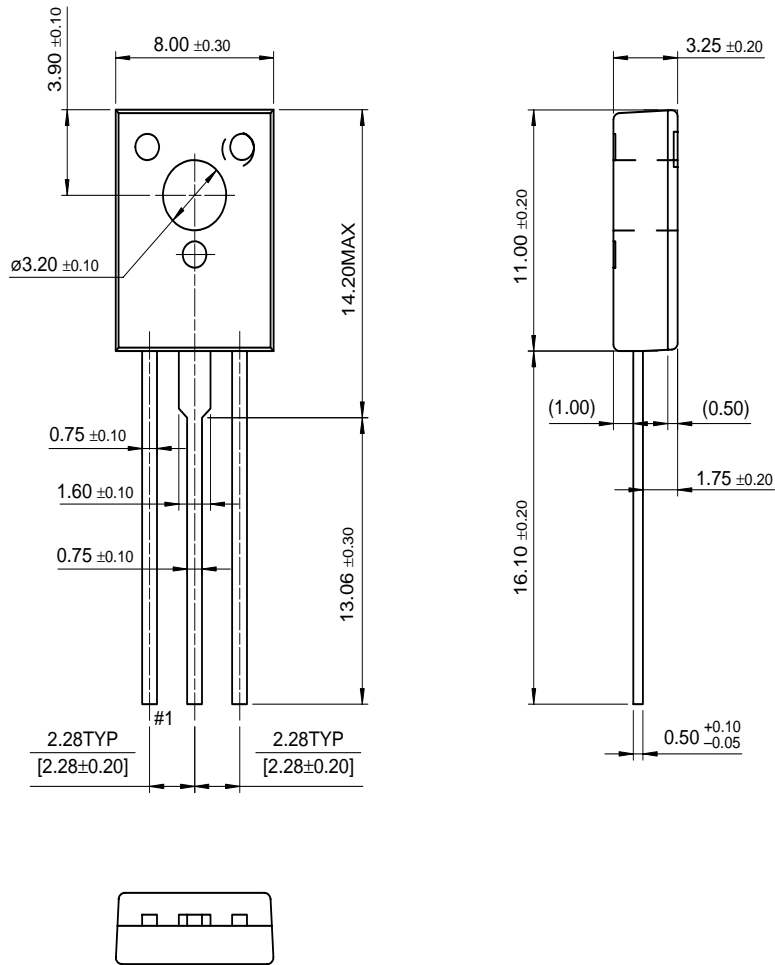


Figure 9. Power Derating

Package Dimensions

KSA1406

TO-126



Dimensions in Millimeters

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KSA1406
PNP Epitaxial Silicon Transistor

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